MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2017/2018

DAC5038 – COMPUTER APPLICATIONS FOR ENGINEERING
(For Diploma students only)

2 MARCH 2018
9:00 a.m. – 11:00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT:

1. This question paper consists of **THREE (3)** pages.

2. There are **FIVE (5)** structured questions in this paper. Each question carries total of **20 Marks**.

3. Answer **ALL** questions in the **Answer Booklet** provided.

Structured Questions [100 marks]

Instruction: Write your answers in the Answer Booklet.

Question 1

a) Explain the **FOUR** major functions of a computer.

(8 marks)

b) Describe **TWO** differences between RAM and ROM.

(4 marks)

c) Explain how the Internet works if Jimmy wants to login to CamSys to check his attendance.

(6 marks)

d) Kelvin likes to post a lot of photos on his Facebook page. At the same time, he sets his account to be viewed by public. What privacy precautions you might suggest to him?

(2 marks)

[TOTAL 20 MARKS]

Question 2

a) Briefly explain the function of the following productivity software and state **ONE** example of each software.

     i.   Word Processing
     ii.   Spreadsheet
     iii.   Database
     iv.   Personal Information Manager (PIM)

(6 marks)

b) What are the **FOUR** criteria stated in a software license?

(4 marks)

c) What is the main function of operating system? Give **TWO** examples of computer operating system and **TWO** examples of mobile device operating system.

(3 marks)

d) Kim plans to install two operating systems in his MacBook. What are the **THREE** methods to have more than one operating system in one computer?

(3 marks)

Continued...

e) Describe the following types of user interface:

 i.   Command-driven interface
 ii.   Menu-driven interface

(4 marks)

[TOTAL 20 MARKS]

Question 3

a) State **THREE** differences between mobile user and power user of computer.

(6 marks)

b) Briefly explain **THREE** factors that affect the CPU's processing power.

(6 marks)

c) Nowadays a lot of people would prefer Solid State Drive (SSD) as their permanent storage instead of mechanical hard drive. State **FOUR** advantages of SSD over mechanical hard drive.

(4 marks)

d) Steven is facing problems in his computer system such as slowness, browsers behaving strangely and even sometimes system not responding. Suggest **FOUR** ways to keep his system reliable.

(4 marks)

[TOTAL 20 MARKS]

Question 4

a) Wireless networks generally have decreased throughput compared with wired networks. State **FIVE** reasons why wireless signals might have decreased throughput.

(5 marks)

b) Anne realised her network connection speed is getting slow recently. She found out that her neighbor is connecting to her wireless network without her permission. Provide **FIVE** precautions to secure her wireless network.

(5 marks)

c) Explain how cell phone technology works.

(4 marks)

d) What is VoIP? State **TWO** advantages and **TWO** disadvantages of using VoIP.

(6 marks)

[TOTAL 20 MARKS]

Continued...

Question 5

a) Briefly discuss how the following viruses spread:
   i.   Boot-sector viruses
   ii. Logic bomb
   iii. Time bomb
   iv. Email viruses
   v.   Macro viruses

(5 marks)

b) Firewalls are designed to restrict access to a network and its computers. List **TWO** ways how firewalls protect a computer from hackers.

(2 marks)

c) What is spyware? How does spyware transmit information to the owner of the program?

(3 marks)

d) Describe the main function of a Database Management System (DBMS) and its **FOUR** main operations.

(6 marks)

e) Briefly discuss the **FOUR** common validation rules that apply to a database field.

(4 marks)

[TOTAL 20 MARKS]

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